

REMARKS

Claim 15 reads as follows with various elements highlighted:

15. An emitter follower circuit comprising:

a first bipolar transistor having a base coupled to a first input signal and having an emitter, the emitter providing an output of the emitter follower circuit;

and

a first current source, providing a fixed current, coupled to the emitter;

a first isolation resistor connected in series between the emitter and the current source, the value of the isolation resistor being chosen to reduce an inrush current into a capacitance between the first isolation resistor and the current source to reduce distortion in an output signal of the circuit when the first input signal is applied to the base.

One such circuit is shown in Applicant's Fig. 6 where the output voltage V_o is taken at the emitter of Q16 and the resistor R_{iso} has a value in accordance with the claimed characteristics.

In the Advisory Action, the examiner stated the "the structure of Murden's Fig. 3 and that recited in claim 15 are the same...." The examiner went on to say, "The argument that 'setting the value of resistor 310 to a specific value is key to the circuit operating correctly' is without merit because no reasons have been provided to back up this blanket assertion (and also because the examiner can find no discussion in Murden saying this.)"

The pertinent portion of Murden's Fig. 3 is copied below:

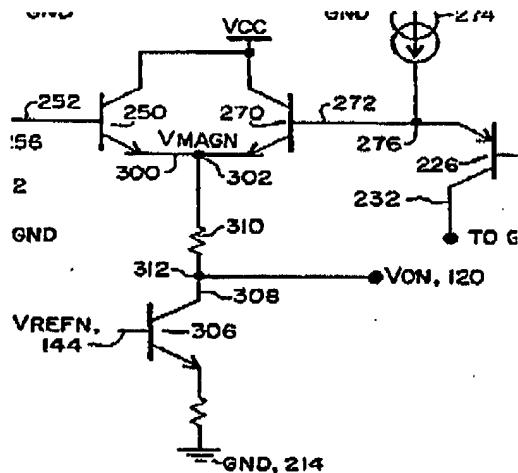


FIG. 3

The examiner believes the following portion of Murden's differential amplifier makes Claim 15 obvious: transistor 250, resistor 310 (used to generate a specific voltage at node 312), and transistor 306 (used as a current source).

Regarding the examiner's statement that the "the structure of Murden's Fig. 3 and that recited in claim 15 are the same," it is respectfully submitted that the emitter follower of Claim 15 and the differential amplifier (or the left side of it) of Murden are not the same. In an emitter follower, the output of the circuit is the emitter of the transistor, which is a claimed limitation. By having the emitter be the output of the claimed circuit, the voltage drop across the resistor due to flowing current is not significant at the emitter output since the voltage at the emitter output is about 0.7 volts below the base voltage. In contrast, the Murden circuit absolutely requires the output node 312 to be below the resistor since the resistor is chosen to create a precisely defined voltage drop with a specified current in order for the circuit to perform its function.

As stated in the response to the final Office Action,

The resistor 310 connected between the collector and the emitters of transistors 250 and 270 has a specific value chosen to provide a voltage drop of "one fourth of the full scale range of the magamp inputs Vin 114 and Vinn 116. (Col. 5, lines 15-17.) Although the examiner stated that the value of resistor

310 can be set to any value, Murden states otherwise. Setting the value of resistor 310 to Murden's stated value is key to the circuit operating correctly.

In the Advisory Action, the examiner indicated that he could find no discussion in Murden regarding the importance of setting the value of resistor 310 to achieve a voltage drop of "one fourth of the full scale range of the magamp inputs Vin 114 and Vinn 116" (col. 5, lines 15-17). It is not fully understood why the examiner cannot see why it is important in Murden to set the value of the resistor 310 to achieve the above-quoted voltage drop. It is stated in col. 3, lines 14-15, that "The value of resistor 310 is the same as resistor 290." Murden goes on to state,

Through this offset [i.e., the 1/4 of the range of inputs Vin 114 and Vinn 116], output voltage Von 120 is shifted down one fourth the full scale range from Vmagn 302.

The combination of the one fourth scale shifts in Vo 118 and Von 120 provides a combined offset of one half the full scale range, so the outputs Vo 118 and Von 120 align as shown in FIG. 1C.

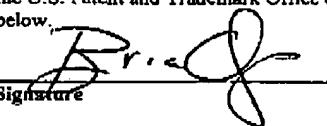
Given such statement in Murden, it cannot be understood how the examiner could treat the claimed value of the resistance in Claim 15 and the value of Murden's resistor 310 as equivalent. Applicant's Claim 15 resistor value has nothing to do with providing a certain voltage drop to achieve a desired output voltage at a point between the resistor and the current source. The two circuits, due to the claim limitations, provide completely different functions and are not physically the same.

There is no motivation provided by Murden to insert an isolation resistor between the emitter and current source of an emitter follower circuit as claimed.

Given that there are important differences between the Murden circuit and Claim 15 (e.g., location of output point, resistor value, differential amp vs. emitter follower), it cannot be seen how one would find it obvious to modify Murden's differential amplifier circuit to create Applicant's emitter follower circuit, which performs an unrelated function. It is respectfully submitted that the examiner has not met the necessary burden of proof to show why it would have been obvious for one

skilled in the art to modify the Murden circuit to become the circuit of Applicant's Claim 15.

Should the Examiner have any questions, the Examiner is invited to call the undersigned at (408) 382-0480.

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Respectfully submitted,



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